Claims:

1. An image encoding system comprising:

(a) providing a first image;

(b) quantizing a discrete cosine transform of said first image using a first set of quantization values;

(c) quantizing said discrete cosine transform of said first image using a second set of quantization values;

(d) comparing said first image to a spatial reconstructed image based upon said first set of quantization values using a model;

(e) comparing said first image to a spatial reconstructed image based upon said second set of quantization values using said model;

(f) selecting one of said first set of quantization values and said second set of quantization values based upon respective said comparing.

2. The method of claim 1 wherein said discrete cosine transform results in a matrix of values.

3. The method of claim 1 wherein said first set of quantization values is based upon, at least in part, the color primaries of a display.

4. The method of claim 1 wherein said first set of quantization values is based upon, at least in part, the modulation transfer function of a display.

5. The method of claim 1 wherein said first set of quantization values is based upon, at least in part, a tone scale of a display.

6. The method of claim 1 wherein said first set of quantization values is based upon, at least in part, the resolution of a display.

7. The method of claim 1 wherein said first set of quantization values is based upon, at least in part, a particular viewing distance for viewing the display.

8. The method of claim 1 wherein said comparing is based upon, at least in part, a contrast sensitivity function of the human visual system.

9. The method of claim 1 wherein said first set of quantization values is based upon, at least in part, a color gamut of a display.

10. The method of claim 1 wherein said comparing is based upon, at least in part, a contrast sensitivity difference model.

11 The method of claim 10 wherein said model collapses to CIELAB for large patches of color.

12. The method of claim 1 wherein said first set of quantization values is

based upon, at least in part, viewing conditions and image-structure dependent.

13. The method of claim 1 wherein said first set of quantization values is based upon, at least in part, a luminance response of a display.

14. The method of claim 1 wherein said selecting is based upon an error measure.

15. The method of claim 1 further comprising determining a first error measure based upon said comparing of said first set and a second error measure based upon said comparing of said second set.

16. The method of claim 15 wherein said selecting is based upon said first and second error measures.

17. The method of claim 16 further comprising modifying said selected set of quantization values based upon said error measure.

18. The method of claim 17 further comprising modifying said image based upon said modified selected set of quantization values.

19. The method of claim 18 wherein said modified image is encoded.

20. An image encoding system comprising:

(a) providing a first image;

(b) quantizing a discrete cosine transform of said first image using a first set of quantization values;

(c) comparing said first image to a spatial reconstructed image based upon said first set of quantization values using a model to determine an error measure;

(d) based upon said error measure modifying said first set of quantization values; and

(e) quantizing said discrete cosine transform of said first image using said modified first set of quantization values.

21. The method of claim 20 wherein a scaling factor is selectively increased based upon said error measure.

22. The method of claim 21 wherein said scaling factor is selectively decreased based upon said error measure.

23. The method of claim 21 wherein said error measure is selectively increased provided said error measure is less than a threshold.

24. The method of claim 22 wherein said error measure is selectively decreased provided said error measure is greater than a threshold.

25. An image encoding system comprising:

(a) providing a first image;

(b) quantizing a discrete cosine transform of said first image using a first set of quantization values;

(c) quantizing said discrete cosine transform of said first image using a second set of quantization values;

(d) comparing said first image to a spatial reconstructed image based upon said first set of quantization values using a model to determine an error measure;

(e) comparing said first image to a spatial reconstructed image based upon said second set of quantization values using said model to determine an error measure;

(f) selecting one of said first set of quantization values and said second set of quantization values based upon respective said error measures;

(g) based upon said error measure modifying a respective set of quantization values;

(h) quantizing said discrete cosine transform of said first image using said modified set of quantization values.